

**IMPORTANT:**  
Refer to [www.extron.com](http://www.extron.com) for the complete user guide and installation instructions before connecting the product to the power source.

## VNM Recorder • Setup Guide

The Extron VNM Recorder is a network storage device used to digitally record and play back multiple streams of high resolution video, audio, and data encoded to an IP network via VN-Matrix encoders and decoders. It can be used with any VN-Matrix application to document, archive, review, and play back highly sophisticated or demanding AV imagery.

This guide provides basic instructions for an experienced installer to configure and operate a VNM Recorder using a basic VN-Matrix system.

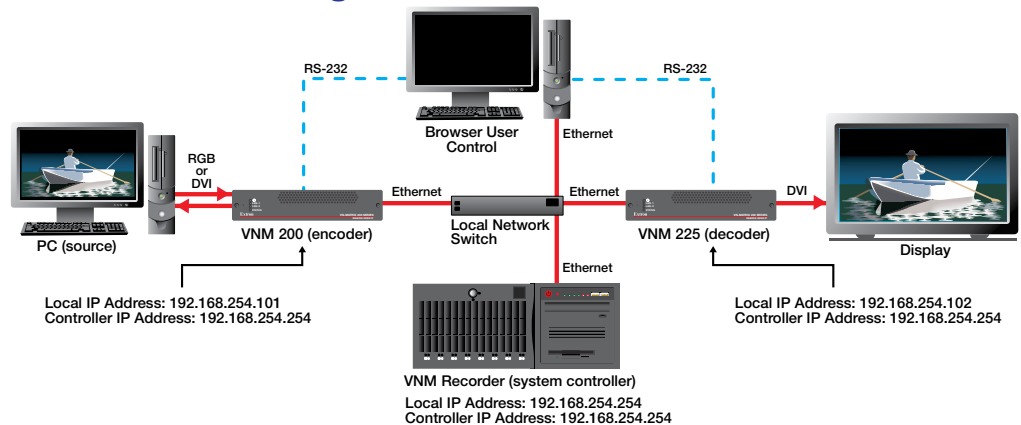
**NOTE:** See the *VNM Recorder User Guide*, *VN-Matrix 200 Series User Guide*, *VN-Matrix 225 Series User Guide*, *VN-Matrix 300 User Guide*, and the *VN-Matrix 325 User Guide* for complete installation, network configuration, and mounting information. User guides are available at [www.extron.com](http://www.extron.com).

## Initial Installation and Configuration of Devices

### Step 1 — Determine the Default Network Settings

Before connecting any device to a network, the default network settings of each device must be changed. On an existing network, check with the network administrator for a range of available IP addresses.

On a closed network, used exclusively for VN-Matrix devices, it is recommended to use addresses within the range of 192.168.254.1 to 192.168.254.254 with a subnet mask of 255.255.255.0.



**Figure 1. Example VN-Matrix Network Configuration**

Figure 1 shows an example addressing scheme for a simple system that contains a VNM Recorder, an encoder, and a decoder.

### Step 2 — Determine the Device that Acts as the Controller

A device within the VN-Matrix system must be designated as the controller of the network. The controller can be one of the following devices:

- VN-Matrix 200, 225, 300, or 325 device, which is suitable for small network systems
- VNM Recorder, which is suitable for small network systems
- VNM Enterprise Controller, which is suitable for large network systems

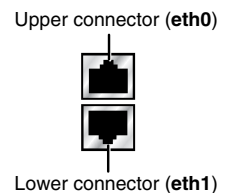
The controller device acts as a central point of reference for each device, manages all of the system communications to every matrix device present, and also serves the web-based control interface to the user. In figure 1, the VNM Recorder is set up as the controller for the system. Once configuration of the VN-Matrix system is complete, the IP address of the controller device can be entered into a suitable web browser running on any PC or laptop connected to the VN-Matrix network.

### Step 3 — Install and Configure the VN-Matrix 200 / 225 / 300 / 325 Devices

Connect these devices as necessary and power them on. Configure the network settings of these devices using a PC running HyperTerminal. For installation and configuration instructions, see the setup guides included with these devices. Figure 1 can also be used as a guide for configuring network settings.

### Step 4 — Connect the Recorder to the VN-Matrix Network

With the VNM Recorder positioned as shown in figure 1, connect the primary VN-Matrix network to the upper Ethernet connector (**eth0**) of the recorder using Category (CAT) 6 cable. If necessary, connect a secondary VN-Matrix network to the lower Ethernet connector (**eth1**) of the recorder using CAT 6 cable.



### Step 5 — Connect Configuration Devices to the Recorder

Connect a mouse, a keyboard, and a computer monitor to the recorder. See the *VNM Recorder User Guide* for more information on connecting these devices.

### Step 6 — Power on the Recorder

Plug a standard IEC power cord into the recorder and connect it to a power source. Power on the recorder.

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## Step 7 — Configure the VNM Recorder Network Settings

The VNM Recorder is pre-configured with the following network settings:

**IP address:** 192.168.254.254  
**Subnet mask:** 255.255.255.0

**NOTE:** Using these settings, the VN-Matrix 200 / 225 / 300 / 325 devices must use IP addresses within the range of 192.168.254.1 through 192.168.254.253 and use the same subnet mask. The example in figure 1 uses the default settings of the VNM Recorder.

Use the following procedure to change the network settings of the VNM Recorder, if necessary.

- a. Enter the administrator username and password at the VNM Recorder login screen.

**NOTES:**

- The login screen appears shortly after powering on the VNM Recorder.
- The default username is **root**. The default password is **Extron2010**. These entries are case sensitive.

- b. From the desktop, select **System > Administration > Network**. The Network Configuration window appears (see figure 2).
- c. Select the **eth0** (upper Ethernet connector) device line to highlight it. The status should read **Active**.
- d. Click on **Deactivate**. The status of the **eth0** device should now read **Inactive**.
- e. Double-click on the **eth0** device line. The Ethernet Device window appears (see figure 3).
- f. Change the **Address** and **Subnet mask** fields as required and then click **OK**.

**NOTE:** The **Default gateway address** field is only required if devices are on different subnets.

- g. Navigate back to the Network Configuration window (see step 7b). Select the **eth0** device and then click **Activate**.
- h. If changes were made, a prompt appears asking to confirm the changes. Click **Yes** to confirm and save the changes.
- i. Another window appears. Click **OK** to continue.
- j. A loading window appears and the necessary changes are made to the system. After the loading window disappears, navigate back to the Network Configuration window and check that the status of the **eth0** device now reads **Active**.
- k. Close the Network Configuration window.

## Step 8 — Configure the VNM Recorder Controller Settings

Use the following procedure to setup the VNM Recorder to use the IP address of the controller device.

- a. If necessary, enter the administrator username and password at the VNM Recorder login screen (see step 7a).
- b. From the desktop, double-click on **Computer > Filesystem > home > matrix\_rec**.
- c. Double-click on the folder that contains the latest release of the recorder software (at the time this guide was released, the latest software would be stored in the **V3.10.9** folder or in a folder with a similar name).
- d. Click on the **config.xml** file to select it.
- e. From the **Edit** menu, select **Duplicate**. This creates a backup copy [named **config (copy).xml**] of the original **config.xml** file. Keep the backup copy for system restoration purposes.
- f. Right-click on the **config.xml** file and select the **Open with “Emacs Text Editor”** option.

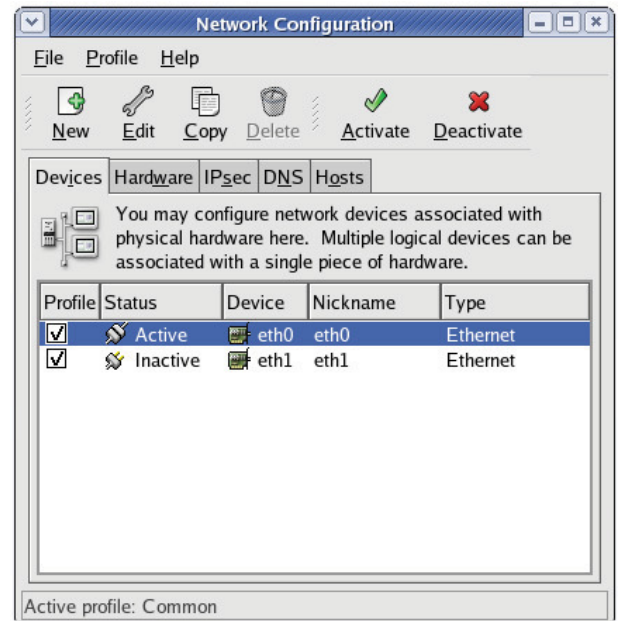


Figure 2. Network Configuration Window

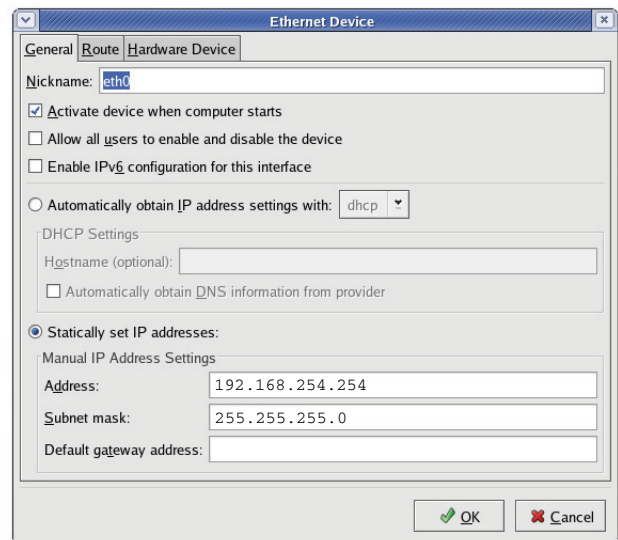


Figure 3. Ethernet Device Window

- g. Near the bottom of this file are two values named `st_controlIp` and `st_localIp0` (see figure 4). Edit these values as follows:
- If the VNM Recorder is the controller device, edit both values to match the IP address of the recorder.
  - If the recorder is **not** the controller device, change the `st_controlIp` value to match the IP address of the controller device. Change the `st_localIp0` value to match the IP address of the recorder.
- h. Save the `config.xml` file. Close the text editor window and all other folder windows.

```

<string>
  <name>st_controlIp</name>
  <value>192.168.254.254</value> Edit this value to match
</string>                               the IP address of the
<int>                                     controller device.
  <name>st_controlPort</name>
  <value>5432</value>
</int>
<string>
  <name>st_localIp0</name>
  <value>192.168.254.254</value> Edit this value to match
</string>                               the IP address of the
</attributes>                             VNM Recorder.
</object>
</serialization>

```

Figure 4. Config.xml Text Window

## Step 9 — Restart the VNM Recorder and the VN-Matrix Network

Restart the VNM Recorder and all devices of the VN-Matrix system. Power down the recorder by pressing and holding the power button on the front panel until the power LED turns off. This turns the recorder off instantly. After a few seconds, turn the recorder back on.

# Recording and Playing Media Files Using the Web-based User Interface

## Step 1 — Access the Web-based User Interface

The web-based user interface can be accessed using a suitable web browser running on any PC or laptop connected to the VN-Matrix network. Follow the steps below to access the user interface.

- a. Navigate to the user interface by typing in the IP address of the controller device into the address bar of a web browser (for example, `http://192.168.254.254`). The screen shown in figure 5 appears in the browser.

**NOTE:** If the VNM Recorder is the controller device, the IP address must be appended with the port number that is used as the web server (for example, `http://192.168.254.254:8090`).

- b. Enter the appropriate username and password.

**NOTE:** By default, these are both set to **admin**. These entries are case sensitive.

- c. Click **Log In** or press the <Enter> key. The Device List page appears (see figure 6).



Figure 5. Controller Device Login Page

Extron								
Device List				Accounts	Alarms	Save All	Help	Logout
VN-Matrix Controller						System Alarm Status: <b>Warning</b>		
Device	Mode	Status	Name	IP Address	Version	Del		
5ch-REC			Recorder	192.168.254.254	ver3.10.9			
200C-DVI			Unit 4	192.168.254.104	ver3.10.9			
200C-DVI			Unit 1	192.168.254.101	ver3.10.9			
200C-DVI			Unit 2	192.168.254.102	ver3.10.9			
200C-DVI			Unit 3	192.168.254.103	ver3.10.9			

Figure 6. Device List Page

- NOTES:**
- When system changes are made, it is recommended to click on the **Save All** tab before logging out.
  - To log out of the interface, click on the **Logout** tab or simply close the web browser.
  - For more information on configuration and control options, click on the **Help** tab. The **Help** tab provides detailed information for each web-based interface page and is a useful reference guide.

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## Step 2 — Configure the VN-Matrix 200 / 225 / 300 / 325 Devices as Encoders or Decoders

For the VNM Recorder to work properly, the VN-Matrix 200 / 225 / 300 / 325 devices must be configured so that at least one device is an encoder and one device is a decoder. For configuration instructions for the VN-Matrix 200 / 225 / 300 / 325 devices, see the setup guides included with these devices.

## Step 3 — Setup a Stream Storage Location

- From the Device List page (see figure 6 on page 3), click the **VNM Recorder** device. The Device page appears.
- From the Device page, click the **Recorder** icon. The Recorder page appears.
- From the Recorder page, click the **Navigate** tab. The Navigate page appears.
- Using the **Content Directory** at the bottom of the Navigate page, navigate to the folder where recorded media files will be stored. Click **Update Storage Path** to set the selected folder as the storage location.

**NOTE:** To create a new directory, navigate to the location where the recorded media streams will be stored and type in the name of the directory in the box to the right of the **Make Directory** button. Click **Make Directory** to create the directory.

- Click the **Save All** tab. The VNM Recorder is now ready to record and play back media files.

## Recording a Stream

- From the Device List page (see figure 6 on page 3), click the **VNM Recorder** device. The Device page appears.
- From the Device page, click the **Recorder** icon. The Recorder page appears (see figure 7).

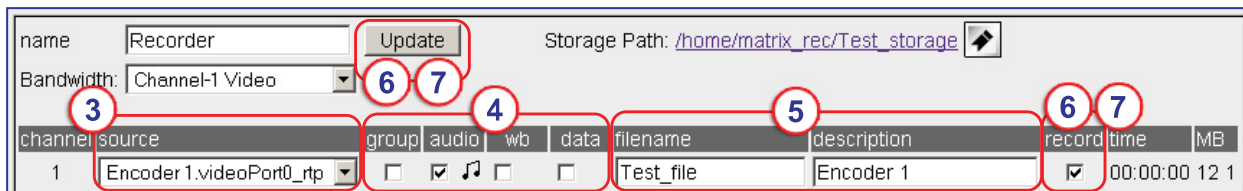


Figure 7. Recorder Page Configuration

- Using the **source** drop-down menus, choose the VN-Matrix encoder device that will be recorded from.
- To record an associated audio stream, check the **audio** box. The ability to record associated whiteboard (**wb**) or data (**data**) streams can also be checked if these functions are available on the source.
- Enter a filename for the stream and an optional description.
- To start recording, check the **record** box and click **Update**.
- To stop recording, uncheck the **record** box and click **Update**.

**NOTE:** Recording does not actually start or stop until **Update** is clicked.

## Playing and Viewing a Recorded Stream

- From the Device List page (see figure 6 on page 3), click the **decoder** device. The Device page appears.
- From the Device page, click the **display** icon. The Display page appears (see figure 8).
- Select a recorder channel from the **Source** drop-down menu and click **Update** to set the source device.
- From the Device List page (see figure 6 on page 3), click the **VNM Recorder** device. The Device page appears.
- From the Device page, click the **Player** icon. The Player page appears.
- In the **Listing** section, click on the media file that will be played back. The media file appears on channel 1.
- Click **Play** to view the media file. Use the various playback buttons to control playback of the media stream.

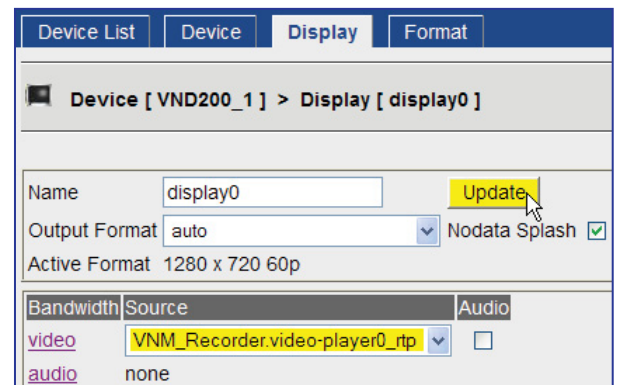


Figure 8. Selecting and Updating the Source of the Decoder

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